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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/634,258	08/08/2000	paul C. Allen	4926/ETEC	4935

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APPLIED MATERIALS, INC.
2881 SCOTT BLVD. M/S 2061
SANTA CLARA, CA 95050

EXAMINER

FERNANDEZ, KALIMAH

ART UNIT PAPER NUMBER

2881

DATE MAILED: 08/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/634,258

Applicant(s)

ALLEN, PAUL C.

Examiner

Kalimah Fernandez

Art Unit

2881

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-10, 12-16, 18-22 and 24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-10, 12-16, 18-22 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 August 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show the configuration relationship to enable the limitation "being configured to alter radiation modulation characteristics thereof in response to computer control" as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 6, 7, 12-13, 18-19, and 24 are rejected under 35 U.S.C.

103(a) as being unpatentable over US Pat No 6,057,639 issued to May et

al and "Deformable-Mirror Spatial Light Modulators" authored Hornbeck, SPIE critical Reviews Series. Vol. 1150, pgs. 86-102.

4. May et al discloses a device for generating a plurality of electrons having a source of radiation (col.2, lines 1-5).
5. May et al discloses a spatial light modulator (40) (col.6, lines 7-11).
6. May et al discloses said modulator (40) having a position so as to modulate said radiation emanating from said source of radiation (col.6, lines 7-10).
7. May et al discloses a photo-cathode (i.e. photo-emitter) (5) (col.3, lines 23-26).
8. May et al discloses said photo-emitter having a position so as to receive said modulated radiation wherein said photo-cathode produces a plurality of electron beams under impact by said modulated radiation (col.3, lines 20-22; col.4, lines 23-49).
9. May et al further discloses the production of a plurality of electron beam is the result of said modulation of the radiation by the spatial light modulator (col.6, lines 40-46).

10. May et al does not teach the limitation " being configured to alter radiation modulation characteristics thereof in response to computer control".

11. However, Hornbeck teaches a computer-controlled SPM (pg.95, section 6.1, lines 1-25).

12. It would have been obvious to an ordinary artisan at the time this invention was made to incorporate the teachings of Hornbeck into May et al since both May and Hornbeck teach the application of voltage to said photo-cathode for generation of the pattern (see 4, lines 10-22 of May et al; pg. 86, col. 1, lines 1-6 of Hornbeck).

13. Additionally, Hornbeck teaches the advantage of higher modulation efficiency (see pg. 86, col.2, lines 18-27 of Hornbeck).

14. As per claims 6,12, 18 and 24, Hornbeck teaches said spatial light modulator is a micro-mirror array (pg.86, col.1, lines 1-5).

15. Claims 4,10, 16, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat No. 6,057,639 issued to May et al and Hornbeck as applied to claims 1,9,13, and 19 and further in view of US Pat No 4,196,257 issued to Engstrom et al.

16. The obvious combination of May et al and Hornbeck teaches the

claimed invention except for "said photocathode is cesium telluride".

17. However, Engstrom et al teaches the typical use of cesium telluride photocathodes (col.1, lines 5-11; col.1, lines 55-64).

18. It would have been obvious to an ordinary artisan to incorporate the use of a cesium telluride photocathode into May et al, since Engstrom et al teaches high sensitivity (col.2, lines 59-62).

19. Claims 2-3,8-9,14-15, and 20-21 rejected under 35 U.S.C. 103(a) as being unpatentable over May et al and Hornbeck as applied to claims 1,7,13 and 19 above, and further in view of US Pat No 5,395,738 issued to Brandes et al.

20. The obvious combination of May et al and Hornbeck teaches the claimed invention except for UV radiation.

21. Brandes et al the use of a UV radiation source (col.1, lines 11-15).

22. It would have been obvious to an ordinary artisan to incorporate the teachings of Brandes et al into May et al since Brandes et al teaches improved performance (col.3, lines 9-60).

23. As per claims 3,9,15 and 21, Brandes et al discloses the generation of UV radiation, which is conventional produced using a mercury arc lamp or the like (col.7, lines 23-33).

R sponse to Arguments

24. Applicant's arguments with respect to claims 1-4, 6-10, 12-16, 18-22, and 24 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kalimah Fernandez whose telephone number is 703-305-6310. The examiner can normally be reached on Mon-Thus between 8:30am-6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Lee can be reached on 703-308-4116. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

kf



JOHN R. LEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800